REMARKS

This amendment, submitted in response to the Office Action dated June 9, 2003, is believed to be fully responsive to each point of objection raised therein. Accordingly, favorable reconsideration is respectfully requested.

Claims 1-29 are pending in the application. The Examiner rejected claims 1-9, 15-21, and 27-29 under 35 U.S.C. § 103(a) as being unpatentable over Betz (USP 6435715) in view of Maschke (USP 5835558). Claims 10-14 and 22-26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Betz as modified by Maschke and further in view of Arakawa (USP 6072188). Applicant submits the following arguments in traversal of the rejections.

Rejection of claims 1-9, 15-21, and 27-29 over Betz in view of Maschke

Betz describes a radiography device with an X -ray device 1 located on a robot 3 and an X -ray receiver 2 located on a robot 12. The robots each have arms 4-7 which are used to move the X-ray device and X-ray receiver. The device has a computer 15 which is connected to the robots, and based on the movement of the robot arms, the locations of the X-ray device and the X-ray receiver are determined, so that they can be aligned with each other. See Abstract, see also column 1, lines 46-51.

Claim 1

The Examiner maintains Betz teaches an angular signal output means that outputs an angular signal which represents the degree of tilt of the radiation surface of the radiation image detection device 2, citing column 3, line 13+ in support.

As an initial matter, claim 1 describes that an angular signal output means that outputs an angular signal which represents the degree of tilt of the radiation emitted from said radiation

source *in relation to* the detection surface of the radiation image detection device. The Examiner has failed to establish the interrelationship between the radiation source and the image detection device.

The Examiner generally cited column 3, line 13+ for teaching an angular signal output means, therefore, it is unclear what element of Betz is being specifically cited. Based on the column and lines cited by the Examiner, and additionally based on the rejection to claims 27-29 (Office Action at p. 3), it appears that the Examiner is referring to computer 15 for teaching an angular signal output means.

The respective column and lines cited by the Examiner describe a computer which *computes the positions of the axes* of the robots containing the X-ray source and X-ray receiver, so that the X-ray source and X-ray receiver can be positioned as desired by a user. The computer ensures that the X-ray source and the X-ray receiver are arranged so that the center ray of an X-ray beam emanating from the X-ray source, strikes the middle of the X-ray detector surface. Column 3, lines 20-31. Since the position of the X-ray source and X-ray receiver are known to the computer, the computer can compute a position of an X-ray receiver based on the displacement of an X-ray source. Column 3, lines 39-48.

Based on the foregoing description of computer 15, it does not appear that the computer outputs an angular signal. In particular, there is no need for the computer to output an angular signal. The computer moves the X-ray receiver robot arm according to the *axes position* of the X-ray device robot arm. Therefore, since the tilt of the radiation is based on the position of the axes of the robot arms, an angular signal is not required to represent the degree of tilt of the

radiation. Moreover, if the Examiner maintains that an angular signal is inherently output by the computer, Applicant respectfully requests that the Examiner provide support for such reasoning.

The Examiner then cited column 3, lines 27+ for teaching the tilt adjustment means of claim 1. The Examiner generally cited to column 3 for teaching a tilt adjustment means therefore, it is unclear what element of Betz if being specifically cited. It appears the Examiner is referring to robot arms 3 and 12 for teaching a tilt adjustment means. Betz indicates that the X-ray receiver is positioned so that the beam from the X-ray source strikes the middle of the receiver. Column 3, lines 28-32. Merely because a beam hits the middle of the receiver, does not mean that the radiation in relation to the radiation image detection device is *perpendicular*, as described in claim 1. The X-ray beam can strike the middle of the receiver, in numerous directions, without the radiation being perpendicular to the receiver.

The Examiner cites Maschke to teach a mobile X-ray exposure apparatus. As a preliminary matter, Maschke does not cure the deficiencies of Betz. The Examiner maintains that the combination of Betz and Maschke is obvious since the portability of Betz would provide freedom of carrying the apparatus from one location to another.

On the contrary, it is not likely that one of ordinary skill in the art would combine the two references. In particular, Betz teaches away from Maschke. In Maschke, an X-ray source 3 and a detector 5 are placed on a carriage 1 with freely articulated arms. See Figure. On the other hand, Betz particularly criticizes such an arrangement noting the computational complexities. Column 1, lines 23-37. Therefore, since Betz teaches away from Maschke, it is unlikely that they would be combined.

Although this aspect of the invention was not cited by the Examiner, the Examiner must look at the references in their entirety. MPEP 2145. The references must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention. *Akzo N.V. v. U.S. International*, 808 F.2d 1471, 1481 (Fed. Cir. 1986). Moreover, the Examiner cannot pick and choose among individual parts of assorted prior art references as a mosaic to recreate a facsimile of the claimed invention. Id. Therefore, when the references are read as a whole, there would be no reason to combine them because they teach away from each other. Moreover, since the system of Maschke, teaches an *integrated* carrier for an X-ray source and an X-ray receiver, while Betz desires displacement of the X-ray source from the X-ray receiver, there would be no reason why one of ordinary skill in the art would combine the references.

Also, it appears that the Examiner's reasoning is a result of hindsight upon looking at the Applicant's invention. Although Maschke is portable, it is not carriable as described in claim 1. Claim 1 describes that the radiation source and the radiation image detection device are *carriable*. It is not likely that the system of Mashke can be carried. In particular, upon viewing the figure, it is rather large and bulky, especially since all of the components are placed on one carriage.

Moreover, there is absolutely no indication in Betz that it should be made portable. On the contrary, it indicates that it should be in a fixed location. In the exemplary embodiment, the robots are arranged with their respective bases on the *floor of a treatment room*, which appears to suggest a particular location and area for placing the device. Betz further states that the robots can be *secured* on the wall or the ceiling of the treatment room. Column 4, lines 31-34. This

again, reinforces the idea that *permanence* and not portability, let alone carriability, is desired in Betz. Furthermore, it appears that the robots of Betz would have to be anchored to the floor in some way, otherwise, they would be imbalanced.

For the above reasons, claim 1 and its dependent claims should be deemed patentable. Since claims 2 and 3 teach similar features, claims 2 and 3 and their dependent claims should be deemed patentable for the same reasons. Since claim 6 describes an angular signal output means, it is patentable for the reasons indicated above.

Claims 3 and 7

Claims 3 and 7 describe a command means. The Examiner has not established that the references disclose a command means, therefore, to the extent a new reference is cited in a subsequent Office Action, such Office Action should be made on a non-final basis. Furthermore, there does not appear to be a structural element in Betz for teaching a command means, and any structures that could possibly have been used in support, appear to have already been cited by the Examiner, resulting in possible double counting problems.

Regardless, it does not appear that any of the structures in Betz teach a command means that generates an exposure command to the radiation source when the tilt of the radiation to be emitted from the radiation source in relation to the detection surface of the radiation image detection device is substantially perpendicular. As previously indicated, the computer 15 moves the X-ray source and the X-ray receiver to the positions desired by the user. The computer ensures that the center ray of the X-ray beam from the X-ray source, strikes the center of the detector surface. It does not appear, and the Examiner has not established, that perpendicular

orientation is contemplated by the combination. Therefore, claims 3 and 7 should be deemed patentable.

Claims 4 and 5

Claims 4 and 5 describe a portable shift means that enables horizontal movement of the radiation source and the radiation image. Again, it does not appear that the Examiner has cited anything for teaching this feature of the claim or anything the Examiner could possibly cite in support, have already been cited. Therefore, since the Examiner has not met the burden of establishing prima facie obviousness, claims 4 and 5 should be deemed patentable.

Claims 20 and 21

Claims 20 and 21 describes the *tilt adjustment means* and the *shift means* comprise screws or geared teeth. As previously indicated, the Examiner has not established a tilt adjustment means as opposed to a shift means. It appears that the Examiner cited the same structure for teaching two structurally different elements.

Regardless, there does not appear to be any structural element of Betz with screws or geared teeth. The Examiner generally cited to the figure, however, it is unclear what in the figure is being cited. Upon reading the specification, there does not appear to be any element with screws or geared teeth. Therefore, claims 20 and 21 should be deemed patentable.

Rejection of claims 10-14 and 22-26 over Betz, Maschke and Arakawa

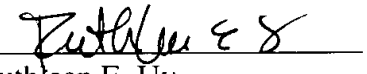
As previously indicated, the Examiner has failed to establish the elements of the claims as indicated above. For at least this reason, dependent claims 10-14 and 22-26 should be deemed patentable.

Applicant has added claims 30-33 to provide more varied protection for the present invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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